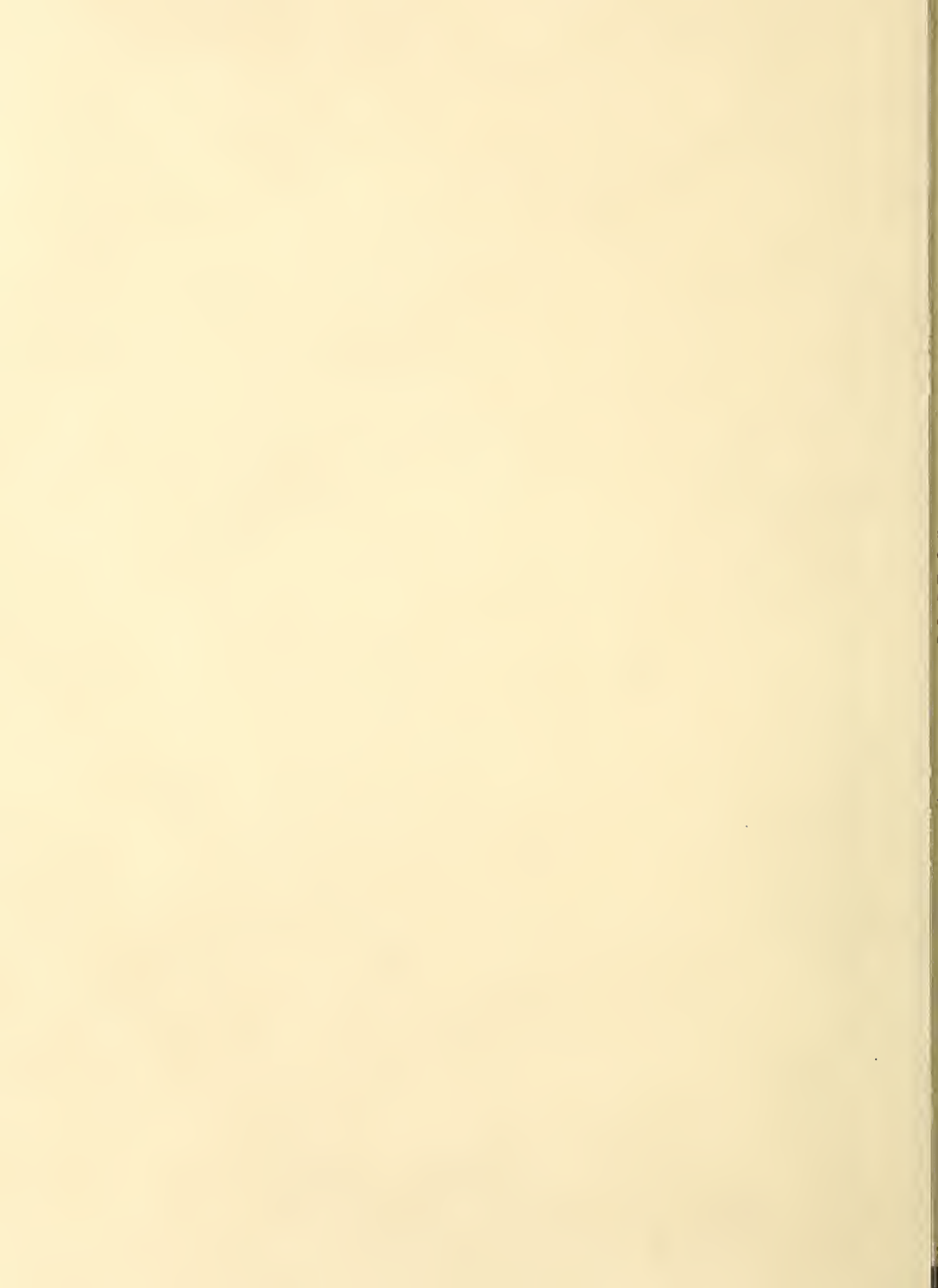
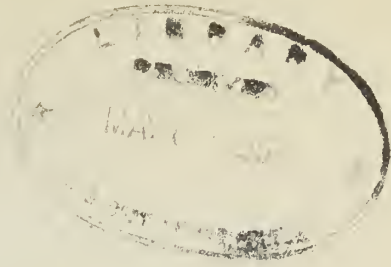


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SNOW SURVEYS AND IRRIGATION WATER FORECASTS
FOR OREGON

AS OF
FEBRUARY 1, 1940

* * *

Issued February 10, 1940

by

Division of Irrigation, Soil Conservation Service
United States Department of Agriculture
and
Oregon Agricultural Experiment Station, Medford Branch
Cooperating

* * * * *

Data included in this report were obtained by
the agencies listed above, in cooperation with the
Oregon State Engineer, U. S. Forest Service, National
Park Service and other Federal, State and local organ-
izations. 1/

* * *

LIBRARY
Soil Conservation Service
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Washington, D. C.

1/ The snow measurements are made principally by field personnel of the following organizations:

STATE

Idaho Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon State Engineer and corps of State Watermasters
Oregon State Highway Engineers

FEDERAL

Department of Agriculture
Forest Service
Soil Conservation Service
Weather Bureau
Department of Interior
Biological Survey
Bureau of Reclamation
Geological Survey
Indian Service
National Park Service

PUBLIC UTILITIES

Eastern Oregon Light and Power Company
Portland General Electric Company
The California Oregon Power Company

MUNICIPALITIES

City of Corvallis
City of LaGrande
City of The Dalles

MUNICIPAL DISTRICTS

Deschutes County Municipal Improvement District
Grants Pass Irrigation District
Medford & Rogue River Irrigation Districts
Ochoco Irrigation District
Warm Springs Irrigation District

2/ Water content determined by melting a measured sample. (The California Oregon Power Company station)

3/ N. R. = No Report.

STATUS OF VALLEY PRECIPITATION AS OF OCTOBER 1 TO DATE

Month	Oct.		Nov.		Dec.		Jan.		Period	
Section	P	D	P	D	P	D	P	D	P	D
S.E.	.69	-0.03	.11	-0.78	1.30	+0.26	1.5	+0.4	3.60	-0.15
S.C.	1.14	+0.14	.05	-1.65	4.23	+2.48	1.9	0.0	7.32	+0.97
N.C.	.43	-0.37	.07	-1.48	2.25	+0.75	2.6	+0.8	5.35	-0.30
Col. Riv.	.38	-0.58	.04	-1.76	1.90	+0.30	2.2	+0.6	4.52	-1.44
Wal. Mts.	2.09	+0.24	.09	-1.88	2.13	+0.18	1.1	-0.6	5.41	-1.46
Blue Mts.	1.11	-0.38	.12	-1.93	2.16	+0.27	2.2	+0.1	5.59	-1.94
Southern	2.28	+0.43	.15	-3.74	7.17	+3.44	2.8	-1.3	12.40	-1.17
Willamette	3.98	+0.10	1.44	-6.55	10.26	+2.30	5.6	-2.0	21.28	-6.15
Area	1.51	+0.02	0.26	-2.47	3.92	+1.25	2.5	-0.2	8.18	-1.46

P - Inches precipitation. D - Inches departure from normal.

S.E. - Southeastern Oregon range lands, Harney and Malheur Counties.

S.C. - Southcentral Oregon range lands, Lake County and Klamath County, except the Cascade Mountains.

N.C. - Northcentral Oregon wheat and range lands, Crook, Deschutes, Jefferson, Wheeler and part of Grant Counties.

Col.Riv. - Columbia River area, wheat and range lands, Gilliam, Morrow, Sherman, Wasco and part of Umatilla Counties.

Wal.Mts. - Wallowa Mountain area, forest and range lands, Wallowa and part of Baker County.

Blue Mts. - The Blue Mountain forest and range area, Union and parts of Baker, Grant and Umatilla Counties.

Southern - Southern Oregon irrigated section, Jackson and Josephine Counties.

Willamette - Parts of Polk, Benton, Yamhill, Washington, Lane and all of Linn, Marion, Clackamas and Multnomah Counties.

Note: Data for the last month shown above are preliminary only, as they are based on a few stations only. Data for earlier months have been corrected to include all the stations in climatological data for the area.

STATUS OF RESERVOIR STORAGE AS OF FEBRUARY FIRST

In the following tabulation, water storage in acre feet in some selected Oregon reservoirs as of About February 1, 1940 is compared with storage as of approximately the same time in 1939, 1938 and 1937.

Storage Reservoir	Stream Basin	Capacity Acre Ft.	Acre Feet in Storage			
			About 2-1-40	About 2-1-39	About 2-1-38	About 2-1-37
Agency Valley	Malheur	60,000	41,290	41,060	22,110	22,340
Antelope	Owyhee	33,434	Empty	3,750	10,000 ^a	5,000 ^a
Clear Lake	Lost River	440,240 ^b	183,000 ^b	229,510 ^b	105,480 ^b	45,480
Crane Prairie	Deschutes	55,220 ^c	29,210	21,080	40,550	35,390
Crescent Lake	Deschutes	80,000	28,900	54,280	33,570	25,960
Drew Creek	Goose Lake	62,500	17,850	32,520	41,100	33,100
Emigrant Gap	Rogue	8,200	5,803	1,859	7,568	Dry
Fish Lake	Rogue	7,720	3,959	5,800	3,911	4,820
Four Mile Lake	Klamath ^d	14,000	7,484	9,927	11,434	7,550
Gerber	Klamath	94,000	36,370 ^b	35,830	44,560	36,370
Hyatt Prairie	Klamath ^d	16,000	2,885	10,230	6,891	3,500
McKay	Umatilla	75,000	15,120	21,440	21,440	4,021
Ochoco	Crooked	47,500	3,740	21,620	10,780	540
Owyhee	Owyhee	715,000	392,760	521,300	571,980	629,390
Thief Valley	Powder	17,400	5,600	11,045	15,341	3,547
Upper Klamath	Klamath	524,800 ^b	265,800 ^b	354,600 ^b	435,200 ^b	295,150 ^b
Wallowa Lake	Wallowa	40,920	10,930	36,380	12,880	6,960
Warm Springs	Malheur	170,000	74,700	137,280	30,840	12,440
Willow Creek	Malheur	26,000	600 ^e	4,000 ^a	Dry	Dry

a - Estimated.

b - Available for use.

c - 40,500 by agreement.

d - By ditch to Rogue River side.

e - Approximate.

THE HISTORY OF THE UNITED STATES OF AMERICA

By J. M. Smith, Esq., of the State of New York.

Year	Event	Location	Result
1776	Declaration of Independence	Philadelphia	United States declared independent of Great Britain
1781	End of the Revolutionary War	Yorktown	British evacuated the area and sailed back to England
1787	Constitutional Convention	Philadelphia	U.S. Constitution was drafted and signed
1791	Adoption of the Bill of Rights	U.S. Congress	First ten amendments to the Constitution were adopted
1800	Move of the Capital to Washington	Washington, D.C.	The new capital city was completed and the government moved there
1803	Acquisition of Louisiana Territory	Spain/France	U.S. doubled its size by acquiring the Louisiana Territory
1812	War of 1812	U.S. vs. Britain	U.S. emerged as a more independent nation
1820	Missouri Compromise	U.S. Congress	Settled the issue of slavery in the new territories
1845	Annexation of Texas	U.S. vs. Mexico	U.S. acquired Texas and part of New Mexico
1848	Treaty of Guadalupe Hidalgo	U.S. vs. Mexico	U.S. acquired California, New Mexico, and Arizona
1861	Start of the Civil War	U.S. vs. Confederate States	U.S. emerged as a more unified nation
1865	End of the Civil War	U.S. vs. Confederate States	Confederate States were defeated and U.S. was reunified
1877	Compromise of 1877	U.S. vs. Rutherford B. Hayes	Hayes became President and Reconstruction ended
1898	Spanish-American War	U.S. vs. Spain	U.S. emerged as a world power
1901	U.S. Sinks the USS Maine	Havana, Cuba	U.S. emerged as a world power
1914	U.S. Enters World War I	U.S. vs. Germany	U.S. emerged as a world power
1918	U.S. Sinks the USS Arizona	Honolulu, Hawaii	U.S. emerged as a world power
1929	U.S. Enters Great Depression	U.S. vs. World	U.S. emerged as a world power
1933	U.S. Enters Prohibition	U.S. vs. World	U.S. emerged as a world power
1941	U.S. Enters World War II	U.S. vs. Japan	U.S. emerged as a world power
1945	U.S. Sinks the USS Arizona	Honolulu, Hawaii	U.S. emerged as a world power
1948	U.S. Enters Cold War	U.S. vs. Soviet Union	U.S. emerged as a world power
1950	U.S. Enters Korean War	U.S. vs. North Korea	U.S. emerged as a world power
1954	U.S. Enters Vietnam War	U.S. vs. North Vietnam	U.S. emerged as a world power
1961	U.S. Enters Space Race	U.S. vs. Soviet Union	U.S. emerged as a world power
1968	U.S. Enters Vietnam War	U.S. vs. North Vietnam	U.S. emerged as a world power
1973	U.S. Enters Vietnam War	U.S. vs. North Vietnam	U.S. emerged as a world power
1975	U.S. Enters Vietnam War	U.S. vs. North Vietnam	U.S. emerged as a world power
1979	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
1981	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
1983	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
1985	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
1987	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
1989	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
1991	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
1993	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
1995	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
1997	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
1999	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
2001	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
2003	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
2005	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
2007	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
2009	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
2011	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
2013	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
2015	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
2017	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
2019	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power
2021	U.S. Enters Iran Hostage Crisis	U.S. vs. Iran	U.S. emerged as a world power

STATUS OF WATERSHED SOIL MOISTURE

Watershed soil moisture outposts were established on five southern Oregon snow courses in 1936. Samples of soil from each foot depth to a depth of six feet, where underlying rock permitted sampling to this depth, have been taken each succeeding fall at these outposts. At each outpost there are from three to seven sampling locations, some in the open and some near trees or in brush, the average being considered representative of topography and surrounding plant cover.

Soil moisture of each one foot core, secured by the King soil tube, was determined by standard methods and moisture content determined as percentage of the soil dry weight.

At three of the five soil moisture outposts, soil samples were taken in the spring of 1937.

In the following table soil moisture content of the 0-3 foot average depth, 3-6 foot average depth, and total 0-6 foot average depth at each outpost is expressed as a percentage of the October 20-22, 1937 soil moisture condition there. In other words, watershed soil moistures of all dates and years are compared with that of late October, 1937, because in general watershed soil moisture then was the greatest measured during the record period.

It will be remembered that the fall of 1936 was notably lacking in precipitation in southern Oregon and snow fell on dry ground. Consequently, some snow measurements on January last, 1937, showed dry ground under the snow and prospective runoff for 1937 was discounted about twenty-five to thirty percent from what otherwise might have been expected. That discount subsequently proved approximately correct.

It was believed that because of marked lack of precipitation during the spring and summer months of 1939, the watersheds might again be very dry by fall, as in 1936. However, the watershed soil moisture samples of November 8, 1939 proved this supposition incorrect, as on the average, watershed soil moisture was very much higher than in either the fall of 1936 or 1938, but was not as high as in the fall of 1937 and not quite as high as in the spring of 1937. In the interval between November 8, 1939 and February 9, 1940, heavy rains have fallen on southern Oregon watersheds. It seems safe to assume that present watershed soil moisture conditions, so far as they will later affect snow water yield to stream flow, are as favorable as at any time for several years.

During the past season, watershed soil moisture outposts were established near Marks Creek snow course No. 344 and on Blue Mountain Summit snow course No. 141. Because there are no preceding values with which last fall's soil moisture contents at those outposts may be compared, those results are not included in the tabulation.

Soil of all Oregon watersheds is generally unfrozen or frozen only to very shallow depths, and in most locations is reported as wet.

Summary of Watershed Outpost
Soil Moisture Determinations
Southern Oregon 1936-39 incl.
(Soil moisture each sampling date expressed as
percentage of that found in the fall of 1937)

Outpost	Date	0-3	3-6	0-6	Outpost	Date	0-3	3-6	0-6
Annie	11-14-36	27.4	39.2	32.0	Fish	11-14-36	48.0	56.8	52.8
Spring	10-21-37	100.0	100.0	100.0	Lake	5-11-37	88.5	89.9	89.3
snow	10-18-38	59.4	55.5	58.1	snow	10-22-37	100.0	100.0	100.0
course	11-8-39	60.3	59.3	59.9	course	10-14-38	45.1	61.5	53.7
Elev.					Elev.	11-7-39	86.5	83.4	85.0
6018					4865				
Whale-	11-20-36	65.1	75.8	69.9	Sis-	11-15-36	46.0	-	-
back	10-21-37	100.0	100.0	100.0	kiyou	5-15-37	107.8	-	-
snow	10-15-38	63.2	71.9	67.0	Summit	10-20-37	100.0	-	-
course	11-8-39	79.1	85.6	82.0	snow	10-17-38	51.3	-	-
Elev.					course	11-7-39	51.3	-	-
5140					Elev. 4630				
Hyatt	11-3-36	53.0	73.8	65.6	Avg.	11-3 to			
Prairie	5-15-37	94.7	77.9	82.3	all	11-20-36	47.9	61.4	55.1
snow	10-20-37	100.0	100.0	100.0	out-	5-11 to			
course	10-17-38	45.2	40.1	41.1	posts,	5-15-37	97.0	83.9	85.8
Elev.	11-7-39	75.1	66.8	69.9	27 sam-	10-20 to			
4900					pling	10-22-37	100.0	100.0	100.0
					loca-	10-14 to			
					tions	10-18-38	52.8	57.2	55.0
						11-7 to			
						11-8-39	70.4	73.8	74.2

COMPARISON OF SNOW COVER AS OF FEBRUARY FIRST
WITH THAT OF PREVIOUS YEARS

For Oregon as a whole, and for elevations above 5,000 feet, of the 44 snow courses reporting, 19 were measured last month, 42 were measured about February 1, 1939, 36 were measured about February 1, 1938 and 22 were measured about February 1, 1937. Comparison of records on these courses for the approximate dates mentioned follows:

Snow cover (water content) now present above 5,000 feet:

As percent of that present one month ago	-----	996
As percent of that present one year ago	-----	56
As percent of that present two years ago	-----	74
As percent of that present three years ago	-----	44

For elevations from 3,000 to 5,000 feet of the 39 snow courses and Copco water stations reporting about February 1, 1940, 21 were measured last month, 37 were measured about February 1, 1939, 34 were measured about February 1, 1938 and 25 were measured about February 1, 1937. Comparison of records on these courses for the approximate dates mentioned follows:

Snow cover (water content) now present from 3,000 to 5,000 feet:

As percent of that present one month ago	-----	870
As percent of that present one year ago	-----	36
As percent of that present two years ago	-----	70
As percent of that present three years ago	-----	17

Snow water content on 94 percent of all of the courses is less than at this time in 1939 and with 20 exceptions, out of 117 comparisons, is substantially less than on about February 1 of either 1938 or 1937.

The great relative percentage increase in snow water content at all elevations during the past month shows the extreme scarcity of snow January first rather than any great supply on February 1.

On many of the older snow courses (established by the Oregon State Engineer in 1929) the snow water content recorded February 1, 1940 was the least for that calendar date of the record period.

On most drainage basins throughout the State, the present outlook is for below normal streamflow during the 1940 irrigation season unless heavier than normal snow pack accumulates during the months of February and March. Additional progress measurements will be made on many snow courses during the closing days of February and final spring snow measurements will be made on all courses about April first.

STATUS OF SNOW COVER AS OF FEBRUARY FIRST (Con't.)

Summary of Snow Survey Data
by Tributary Drainages as of about February First

Tributary Drainage	Number of snow courses averaged	Average Water Depth in Snow Cover (Inches)				1940 Snow Water Depth (In.) expressed as % of that in		
		1940	1939	1938	1937	1939	1938	1937
Owyhee River	1	4.8	8.8			55		
	-	-		-			-	
	1	4.8			9.4			51
Malheur River	5	3.4	5.2			65		
	5	3.4		5.0			68	
	2	3.3			6.2			53
Burnt River	3	2.6	4.9			53		
	2	2.4		3.1			77	
	1	1.8			6.4			28
Powder River	5	5.0	8.1			62		
	2	4.6		7.4			62	
	1	5.3			8.4			63
Pine Creek	1	9.7	17.5			55		
	1	9.7		21.4			45	
	-	-			-			-
Grande Ronde River	5	7.9	12.4			64		
	3	10.0		14.7			68	
	2	11.2			12.9			87
Walla Walla River	1	5.9	14.1			42		
	1	5.9		9.7			61	
	1	5.9			16.6			36
Umatilla River	4	3.4	6.8			50		
	3	3.5		4.3			81	
	3	3.5			11.1			32
Willow Creek	1	2.8	5.4			52		
	1	2.8		2.8			100	
	1	2.8			14.1			20
John Day River	9	2.5	5.2			48		
	7	2.5		3.8			66	
	7	2.5			7.4			34
Deschutes River	6	5.4	11.5			47		
	6	5.4		8.0			68	
	3	4.9			18.2			27

Crooked River	4	2.0	3.9		51		
	3	2.0		1.9		105	
	2	1.9			5.5		35
Sandy River	2	6.3	21.3		30		
	2	6.3		18.9		33	
	-	-			-		-
Clackamas River	2	2.5	7.4		34		
	2	2.5		5.5		45	
	-	-			-		-
Willamette River	7	4.6	15.4		28		
	4	6.4		9.6		67	
	1	6.3			25.1		25
Harney Basin	4	2.0	3.5		57		
	4	2.0		1.4		143	
	4	2.0			4.4		45
Silver Lake Basin	1	1.0	2.8		36		
	-	-		-		-	-
	-	-			-		-
Warner Lake	1	3.0	5.4		56		
	-	-		-		-	-
	-	-			-		-
Umpqua River	5	2.4	9.9		24		
	6	2.1		5.0		42	
	5	1.1			15.6		7
Upper Rogue River	11	3.2	7.9		40		
	13	4.8		7.9		61	
	7	1.1			13.6		8
Applegate River	4	6.3	9.3		68		
	4	6.3		7.4		85	
	4	6.3			14.9		42
Illinois River	2	2.7	7.8		35		
	2	2.7		2.4		112	
	2	2.7			20.1		13
Klamath Lake Basin	19*	2.7	5.1		53		
	20*	3.8		5.7		67	
	15*	1.1			6.4		17
Goose Lake Basin	3*	1.8	5.7		32		
	2*	1.2		3.7		32	
	-	-			-		-

* Including Copco water measurement stations.

TRIBUTARY BASINS (Primary & Secondary & Snow Courses)	LOCATION		SNOW COVER MEASUREMENTS About February 1, 1940					AVERAGE WATER DEPTH (INCHES)		
	Oregon Number	Sec. Twp. Range	Elev.	Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)	One Month ago (1-1-40)	One Year ago (2-1-39)	Two Years ago (2-1-38)	Three Years ago (2-1-37)
UPPER COLUMBIA DRAINAGE										
LOWER SNAKE IN OREGON										
OWYHEE RIVER										
Silver City	Idaho	6 5S 3W	6400	1-31	18.2	4.8	0.0	8.8	-	9.4
MALHEUR RIVER										
Blue Mountain Spring	133	21 15S 35E	5900	1-29	16.2	3.6	1.0	7.4	9.0	8.2
Crane Prairie	137	24 16S 34E	5375	2-1	12.6	3.0	-	5.4	4.1	-
Lake Creek	136	10 16S 33½E	5120	2-2	15.3	3.4	-	6.5	7.8	-
Rock Spring	134	23 18S 32E	5100	2-3	11.8	3.2	0.3	3.7	1.4	4.2½
Stinking Water	135	6 21S 37E	4800	1-30	12.3	3.7	2.0	2.9	2.7	-
BURNT RIVER										
Blue Mountain Summit	141	6 12S 36E	5098	1-31	10.6	1.8	1.0	5.0	1.8	6.4
Dooley Mountain	156	32 11S 40E	5430	2-1	14.6	3.1	0.0	2.9	-	-
Tipton	142	34 10S 35½E	5100	Abt. 1-31	17.0	3.0	-	6.8	4.5	-
POWDER RIVER										
Anthony Lake	155	18 7S 37E	7125	1-30	27.7	8.7	4.0	13.6	-	-
Bourne	154	33 8S 37E	5800	1-31	22.8	5.3	1.8	7.8	9.9	8.4
Dooley Mountain	156	32 11S 40E	5430	2-1	14.6	3.1	0.0	2.9	-	-
Eilertson Meadows	151B	18 8S 38E	5400	1-30	19.0	4.0	2.0	9.0	5.0	-
Gold Center	249	21 9S 36E	5340	1-31	17.0	3.9	0.0	7.0	-	-
PINE CREEK										
Schneider Meadows	161	35 6S 45E	5400	1-28	38.3	9.7	-	17.5	21.4	-

1	1005	100	1000	100	100
2	1006	100	1000	100	100
3	1007	100	1000	100	100
4	1008	100	1000	100	100
5	1009	100	1000	100	100
6	1010	100	1000	100	100
7	1011	100	1000	100	100
8	1012	100	1000	100	100
9	1013	100	1000	100	100
10	1014	100	1000	100	100
11	1015	100	1000	100	100
12	1016	100	1000	100	100
13	1017	100	1000	100	100
14	1018	100	1000	100	100
15	1019	100	1000	100	100
16	1020	100	1000	100	100
17	1021	100	1000	100	100
18	1022	100	1000	100	100
19	1023	100	1000	100	100
20	1024	100	1000	100	100
21	1025	100	1000	100	100
22	1026	100	1000	100	100
23	1027	100	1000	100	100
24	1028	100	1000	100	100
25	1029	100	1000	100	100
26	1030	100	1000	100	100
27	1031	100	1000	100	100
28	1032	100	1000	100	100
29	1033	100	1000	100	100
30	1034	100	1000	100	100
31	1035	100	1000	100	100
32	1036	100	1000	100	100
33	1037	100	1000	100	100
34	1038	100	1000	100	100
35	1039	100	1000	100	100
36	1040	100	1000	100	100
37	1041	100	1000	100	100
38	1042	100	1000	100	100
39	1043	100	1000	100	100
40	1044	100	1000	100	100
41	1045	100	1000	100	100
42	1046	100	1000	100	100
43	1047	100	1000	100	100
44	1048	100	1000	100	100
45	1049	100	1000	100	100
46	1050	100	1000	100	100
47	1051	100	1000	100	100
48	1052	100	1000	100	100
49	1053	100	1000	100	100
50	1054	100	1000	100	100
51	1055	100	1000	100	100
52	1056	100	1000	100	100
53	1057	100	1000	100	100
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56	1060	100	1000	100	100
57	1061	100	1000	100	100
58	1062	100	1000	100	100
59	1063	100	1000	100	100
60	1064	100	1000	100	100
61	1065	100	1000	100	100
62	1066	100	1000	100	100
63	1067	100	1000	100	100
64	1068	100	1000	100	100
65	1069	100	1000	100	100
66	1070	100	1000	100	100
67	1071	100	1000	100	100
68	1072	100	1000	100	100
69	1073	100	1000	100	100
70	1074	100	1000	100	100
71	1075	100	1000	100	100
72	1076	100	1000	100	100
73	1077	100	1000	100	100
74	1078	100	1000	100	100
75	1079	100	1000	100	100
76	1080	100	1000	100	100
77	1081	100	1000	100	100
78	1082	100	1000	100	100
79	1083	100	1000	100	100
80	1084	100	1000	100	100
81	1085	100	1000	100	100
82	1086	100	1000	100	100
83	1087	100	1000	100	100
84	1088	100	1000	100	100
85	1089	100	1000	100	100
86	1090	100	1000	100	100
87	1091	100	1000	100	100
88	1092	100	1000	100	100
89	1093	100	1000	100	100
90	1094	100	1000	100	100
91	1095	100	1000	100	100
92	1096	100	1000	100	100
93	1097	100	1000	100	100
94	1098	100	1000	100	100
95	1099	100	1000	100	100
96	1100	100	1000	100	100
97	1101	100	1000	100	100
98	1102	100	1000	100	100
99	1103	100	1000	100	100
100	1104	100	1000	100	100

TRIBUTARY BASINS

(Primary & Secondary & Snow Courses)	<u>LOCATION</u>		<u>SNOW COVER MEASUREMENTS</u>		<u>AVERAGE WATER DEPTH (INCHES)</u>			
	Oregon Number	Sec. Twp. Range	Elev.	Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)	About February 1, 1940	
							One Month ago (1-1-40)	One Year ago (2-1-39)
							Two Years ago (2-1-38)	Three Years ago (2-1-37)

GRANDE RONDE RIVER

Anthony Lake	155	18	7S	37E	7125	1-30	27.7	8.7	4.0	13.6	-	-
Aneroid Lake	183	16	4S	45E	7480	1-28	50.5	16.5	-	13.4	21.0	9.3
Beaver Reservoir	189	8	5S	37E	5340		N.R.	N.R.	0.0	8.2	-	-
Moss Spring	180	27	3S	41E	5860	2-1	26.3	7.5	4.2	18.0	13.3	-
Schoolwarm	248	28	4S	34E	4775	1-29	4.4	0.9	-	3.0	-	-

LOWER COLUMBIA DRAINAGE

WALLA WALLA RIVER

Tollgate	212	32	4N	38E	5070	1-26	22.2	5.9	-	14.1	9.7	16.6
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UMATILLA RIVER

Emigrant Springs	222	29	1N	35E	3925	1-25	13.0	2.2	-	2.9	1.0	7.5
Lucky Strike	223	28	3S	32E	5050	1-27	15.7	3.4	-	6.0	-	-
Meacham	221	24&25	1S	35E	4300	1-25	12.0	2.3	-	4.0	2.1	9.3

WILLOW CREEK

Arbuckle Mountain	241	33	4S	29E	5400	1-30	12.7	2.8	-	5.4	2.8	14.1
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JOHN DAY RIVER

Arbuckle Mountain	241	33	4S	29E	5400	1-30	12.7	2.8	-	5.4	2.8	14.1
Beech Creek Summit	246A	4	12S	30E	4800	1-29	7.6	2.4	0.0	4.0	2.0	4.9
Blue Mountain Spring	133	21	15S	35E	5900	1-29	16.2	3.6	1.0	7.4	9.0	8.2

TRIBUTARY BASINS (Primary & Secondary & Snow Courses)	LOCATION		SNOW COVER MEASUREMENTS				AVERAGE WATER DEPTH (INCHES)			
			About February 1, 1940							
	Oregon Number	Sec. Twp. Range	Elev.	Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)	One Month ago (1-1-40)	One Year ago (2-1-39)	Two Years ago (2-1-38)	Three Years ago (2-1-37)
DESCHUTES RIVER										
Blue Mountain Summit	141	6 12S 36E	5098	1-31	10.6	1.8	1.0	5.0	1.8	6.4
Gold Center	249	21 9S 36E	5340	1-31	17.0	3.9	0.0	7.0	-	-
Izee Summit	964	28 16S 29E	5293	1-29	10.2	1.0	Trace	5.5	1.7	5.5
Olive Lake	245	14 9S 33½E	6000	1-30	21.0	5.0	1.8	7.4	8.7	8.4
Schoolfarm	248	28 4S 34E	4775	1-29	4.4	0.9	-	3.0	-	-
Starr Ridge	247	20 15S 31E	5156	1-29	7.1	1.1	Trace	1.9	0.9	4.4
DESCHUTES RIVER										
Caldwell Ranch	326	30 21S 8E	4400	2-1	12.6	2.9	-	3.6	4.0	-
Cascade Summit	321	7 23S 6½E	4880	1-29	19.6	6.3	-	17.4	8.8	25.1
Charlton Lake	327	23 21S 6E	5750	2-3	20.2	5.1	-	11.3	9.0	-
Crescent Lake	325	11 24S 6E	4760	1-29	17.0	4.2	-	6.5	3.1	11.0
Derr	343	14 13S 23E	5670	1-26	12.4	2.0	-	5.0	3.2	-
Hogg Pass	351	24 13S 7½E	4755	1-28	35.4	9.5	-	20.4	15.0	-
Marks Creek	344	25 12S 19E	4540	1-26	7.8	2.1	-	2.2	0.9	-
Ochoco Meadows	341	21 13S 20E	5200	1-29	11.4	1.8	-	5.7	N.R.	6.1
Tanarack	342	8 15S 25E	4800	1-31	7.3	2.0	-	2.8	1.7	4.9
Three Creeks Meadows	331	3 17S 9E	5600	2-2	15.6	4.3	-	10.1	8.2	18.5
SANDY RIVER										
Phlox Point - Mt. Hood	452	6 3S 9E	5600	1-31	29.6	9.7	5.5	33.0	31.8	-
Still Creek	451	25 3S 8½E	3700	1-31	10.3	3.0	Trace	9.6	6.1	-
CLACKANIAS RIVER										
Clackamas Lake	592	35 5S 8½E	3400	1-31	8.7	1.8	Trace	5.3	4.6	-
Peavine Ridge	591	14&15 6S 7E	3500	2-1	12.1	3.2	0.0	9.6	6.5	-

TRIBUTARY BASINS (Primary & Secondary & Snow Courses)	LOCATION		SNOW COVER MEASUREMENTS				AVERAGE WATER DEPTH (INCHES)				
	Oregon Number	Sec. Twp. Range	Elev.	Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)	About February 1, 1940				
							One Month ago (1-1-40)	One Year ago (2-1-39)	Two Years ago (2-1-38)	Three Years ago (2-1-37)	
WILLAMETTE RIVER											
Cascade Summit	321	7 23S	6 $\frac{1}{2}$ E	4880	1-29	19.6	6.3	-	17.4	8.8	25.1
Champion	522	12 23S	1E	4500	1-30	5.6	1.7	-	18.0	-	-
Charlton Lake	327	23 21S	6E	5750	2-3	20.2	5.1	-	11.3	9.0	-
Hogg Pass	351	24 13S	7 $\frac{1}{2}$ E	4755	1-20	35.4	9.5	-	20.4	15.0	-
McKenzie	531	35 15S	7 $\frac{1}{2}$ E	4800	1-23	21.7	5.0	-	21.0	-	-
Mary's Peak	541	21 12S	7W	3600	2-1	0.0	0.0	-	16.0	-	-
Waldo Lake	521A	15 21S	6E	5500	2-2	14.2	4.8	-	10.6	5.4	-
INTERIOR DRAINAGE											
SILVER LAKE											
Silver Creek	942	25&26 29S	13E	4900	1-31	Approx. 2"	1.0	-	2.8	-	-
HARNEY BASIN											
Idylwild Camp	961A	33 20S	31E	5200	2-3	8.9	2.8	0.2	3.0	1.6	3.6
Izee Summit	964	28 16S	29E	5293	1-29	10.2	1.0	Trace	5.5	1.7	5.5
Rock Spring	134	23 18S	32E	5100	2-3	11.8	3.2	0.3	3.7	1.3	4.2
Starr Ridge	247	20 15S	31E	5156	1-29	7.1	1.1	Trace	1.9	0.9	4.4
WARNER LAKE											
Camas Creek	911A	5 39S	21E	5720	1-29	11.5	3.0	-	5.4	-	-
WEST COAST DRAINAGE											
UNPQUA RIVER											
Champion	522	12 23S	1E	4500	1-30	5.6	1.7	-	18.0	-	-
Diamond Lake	743	29 27S	6E	5315	1-31	12.0	3.1	1.0	12.2	7.9	15.6

SILVER LAKE

HARNEY BASIN

WARNER LAKE

UNPQUA RIVER

SILVER LAKE

HARNEY BASIN

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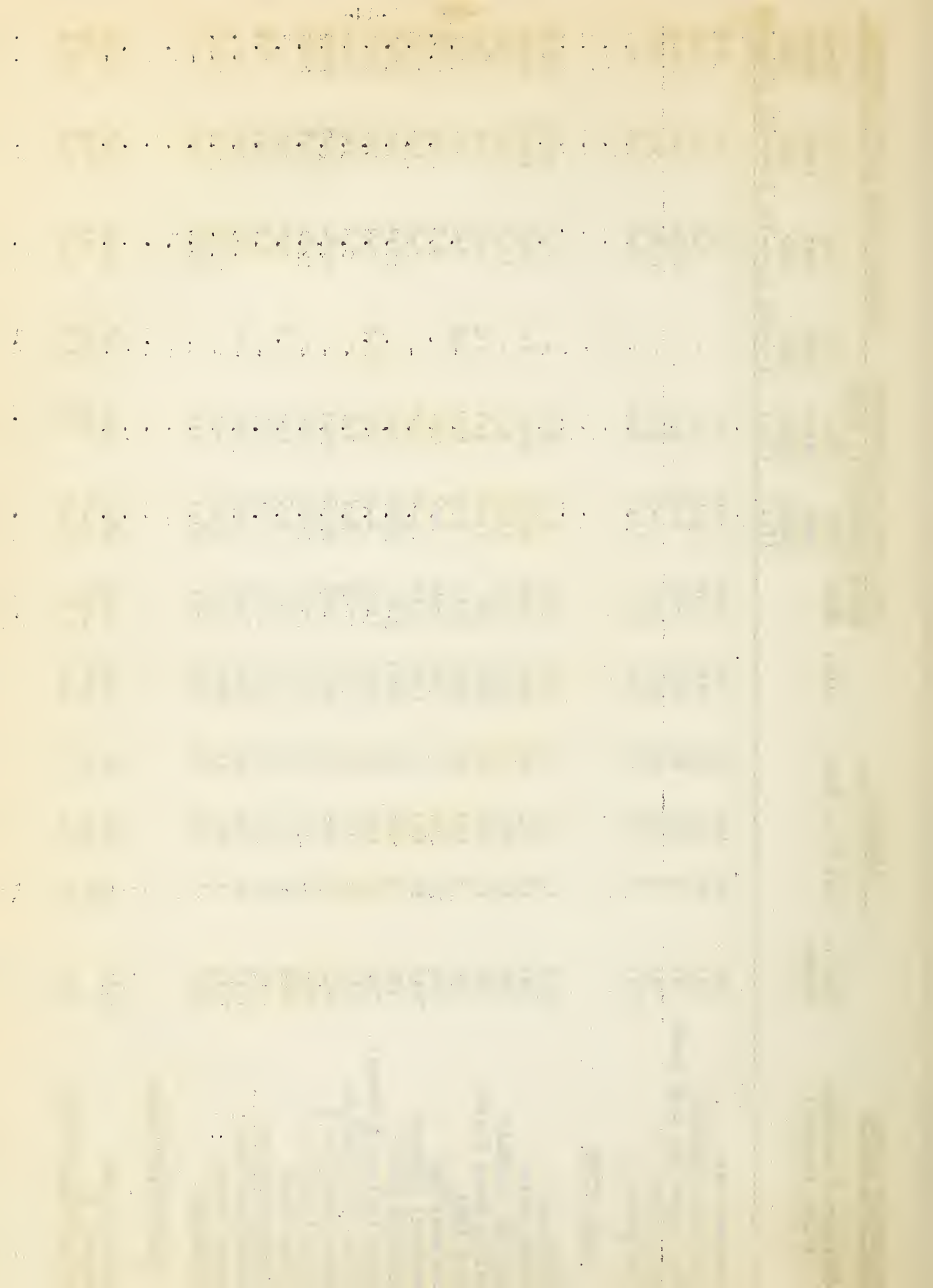
HARNEY BASIN

WARNER LAKE

UNPQUA RIVER

SILVER LAKE

TRIBUTARY BASINS (Primary & Secondary & Snow Courses)	LOCATION		SNOW COVER MEASUREMENTS About February 1, 1940					AVERAGE WATER DEPTH (INCHES)		
	Oregon Number	Sec. Twp. Range	Elev.	Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)	One Month ago (1-1-40)	One Year ago (2-1-39)	Two Years ago (2-1-38)	Three Years ago (2-1-37)
ROGUE RIVER										
Goolaway Gap	726	32 32S 3W	3000	1-30	0.0	0.0	-	0.5	0.0	9.9
Goolaway Mountain	7215	30 32S 3W	3730	1-30	0.0	0.0	-	2.5	1.7	24.2
No., Umpqua nr. Lake Creek	742	19 26S 6E	4215	1-20	5.2	1.2	-	N.R.	4.0	14.1
Trap Creek	741	1 27S 4E	3800	1-20	4.4	1.0	-	N.R.	5.1	14.4
Whaleback	7217	3 31S 2E	5140	1-31	18.7	7.1	-	16.1	11.4	-
ROGUE RIVER										
Althouse	7216	17 41S 7W	4400	1-30	0.0	0.0	-	3.3	Trace	18.6
Annie Spring	831	19 31S 6E	6018	1-30	60.3	20.5	9.4	26.5	22.8	N.R.
Big Red Mountain	729	33 40S 1W	6500	1-28	35.8	9.9	-	11.0	13.2	15.0
Billie Creek Divide	722	17 36S 5E	6000	2-2	12.2	3.7	3.5	11.3	9.2	17.1
Fish Lake	725	3 37S 4E	4865	1-31	0.0	0.0	0.0	3.3	6.7	10.1
Goolaway Gap	726	32 32S 3W	3000	1-30	0.0	0.0	-	0.5	0.0	9.9
Goolaway Mountain	7215	30 32S 3W	3730	1-30	0.0	0.0	-	2.5	1.7	24.2
Grayback Peak	727	9 40S 5W	6000	2-1	15.5	5.5	-	12.4	4.9	21.7
Hyatt Prairie Reservoir	723	15 39S 3E	4900	1-31	0.0	0.0	0.0	5.7	3.5	13.8
Little Red Mountain	7210	25 40S 2W	6500	1-29	19.7	5.8	-	7.4	7.6	11.4
Seven Lakes No. 1	7211	3 34S 5E	6800	1-28	52.0	16.5	-	N.R.	21.8	N.R.
Seven Lakes No. 2	7212	26 33S 5E	6200	1-28	38.4	10.3	-	N.R.	15.8	N.R.
Silver Burn	7219	30 30S 4E	3720	1-31	0.0	0.0	0.0	6.4	3.4	-
Siskiyou Summit	728	17 40S 2E	4630	1-28	0.5	0.1	-	4.5	2.2	8.6
South Fork Canal	7218	12 33S 3E	3500	1-31	0.0	0.0	0.0	3.7	0.0	-
Wagner Butte	7213	1 40S 1W	6800	1-27	18.0	4.0	-	6.4	3.9	11.6
Whaleback	7217	3 31S 2E	5140	1-31	18.7	7.1	-	16.1	11.4	-
KLAMATH LAKE BASIN										
Annie Spring	831	19 31S 6E	6018	1-30	60.3	20.5	9.4	26.5	22.8	N.R.
Beatty 2/		22 36S 12E	4300	1-31	0.0	0.0	0.0	1.2	0.0	1.5
Billie Creek Divide	722	17 36S 5E	6000	2-2	12.2	3.7	3.5	11.3	9.2	17.1



TRIBUTARY BASINS

(Primary & Secondary
& Snow Courses)

LOCATION

Sec. Twp. Range

Oregon
Number

Elev.

SNOW COVER MEASUREMENTS

About February 1, 1940

Date

Avg.
Snow
Depth
(In.)

Avg.
Water
Depth
(In.)

One
Month
ago
(1-1-40)

One
Year
ago
(2-1-39)

Two
Years
ago
(2-1-38)

Three
Years
ago
(2-1-37)

Chemult No. 1

Chiloquin 2/

Crowder Flat (California)

Crystal 2/

Fort Klamath 2/

Hyatt Prairie Reservoir

Kirk 2/

Lake of the Woods No. 1

Pelican 2/

Quartz Mountain

Quartz Mountain 2/

Richardson Ranch 2/

Rocky Point 2/

Seven Lakes No. 1

Seven Lakes No. 2

Strawberry

Sun Mountain

Taylor Butte

Yamsey 2/

GOOSE LAKE BASIN

Camas Creek

Quartz Mountain 2/

Quartz Mountain

Strawberry

100	100	100	100
200	200	200	200
300	300	300	300
400	400	400	400
500	500	500	500
600	600	600	600
700	700	700	700
800	800	800	800
900	900	900	900
1000	1000	1000	1000
1100	1100	1100	1100
1200	1200	1200	1200
1300	1300	1300	1300
1400	1400	1400	1400
1500	1500	1500	1500
1600	1600	1600	1600
1700	1700	1700	1700
1800	1800	1800	1800
1900	1900	1900	1900
2000	2000	2000	2000

100 200 300 400 500 600 700 800 900 1000
 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000
 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000
 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000
 4100 4200 4300 4400 4500 4600 4700 4800 4900 5000
 5100 5200 5300 5400 5500 5600 5700 5800 5900 6000
 6100 6200 6300 6400 6500 6600 6700 6800 6900 7000
 7100 7200 7300 7400 7500 7600 7700 7800 7900 8000
 8100 8200 8300 8400 8500 8600 8700 8800 8900 9000
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